



PATENT

Attorney Docket No. 05569.0004.DVUS11

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

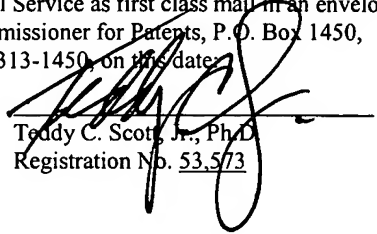
Applicant(s): McCafferty, et al.  
App. No.: 10/803,622  
Confirmation No.: 6206  
Filing Date: March 18, 2004  
Title: Methods for Producing Members of  
Specific Binding Pairs  
Art Unit: 1639  
Examiner: To Be Assigned

CERTIFICATE OF MAILING

I hereby certify that this paper is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this date:

07/09/04

Date

  
Teddy C. Scott, Jr., Ph.D.  
Registration No. 53,573

REQUEST FOR CORRECTION TO FILING RECEIPT

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sirs:

In response to the Notice Regarding Benefit/Priority Claim mailed April 28, 2004, we are enclosing herewith a copy of the Official Filing Receipt received from the U.S. Patent & Trademark Office with a correction priority claim marked in red ink.

The Notice Regarding Benefit/Priority Claim indicated that Applicant submitted a benefit claim to a prior-filed nonprovisional application and improperly indicated the prior-filed application is a national application under 37 U.S.C. 371, and requests applicant to provide evidence that the prior-filed application is a national stage application.

This application is a divisional application of U.S. Patent Application No. 09/726,219, filed November 28, 2000, which is a continuation of U.S. Patent Application No. 08/484,893, filed June 7, 1995 (now U.S. Patent No. 6,172,197), which is a continuation of U.S. Application No. 07/971,857 (the "'857 Application") which is the National Stage of PCT/GB91/01134, filed July 10, 1991 (now U.S. Patent No. 5,969,108). Enclosed herewith is a copy of the first page of U.S. Patent No. 5,969,108, which indicates that the '857 Application was a national stage application filed under 35 U.S.C. 371. Applicants submit herewith Preliminary Amendment Under 37 C.F.R. § 115 clarifying the priority claim.

U.S. Application No. 10/803,622  
Filed: March 18, 2004

Docket No. 05569.0004.DVUS11

Please ensure that this correction is entered, and that a Corrected Filing Receipt is mailed to our office.

Respectfully submitted,

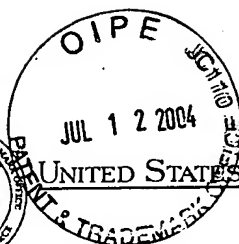
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## UNITED STATES PATENT AND TRADEMARK OFFICE

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APPL NO.	FILING OR 371 (c) DATE	ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	DRAWINGS	TOT CLMS	IND CLMS
10/803,622	03/18/2004	1639	1456	05569.0004.DVUS11	46	17	2

CONFIRMATION NO. 6206

HOWREY SIMON ARNOLD & WHITE, LLP  
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1299 Pennsylvania Avenue, N.W.  
Washington, DC 20004-2402

## FILING RECEIPT



\*OC000000012472520\*

Date Mailed: 04/28/2004

Receipt is acknowledged of this regular Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Filing Receipt Corrections, facsimile number 703-746-9195. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

## Applicant(s)

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Timothy Peter Bonnert, Cambridge, UNITED KINGDOM;

DOCKETED  
Smm 4/30/04

## Assignment For Published Patent Application

Cambridge Antibody Technology Limited;  
Medical Research Council;

## Domestic Priority data as claimed by applicant

This application is a DIV of 09/726,219 11/28/2000  
which is a CON of 08/484,893 06/07/1995 PAT 6,172,197  
which is a CON of 07/971,857 01/08/1993 PAT 5,969,108

which is a 371 of PCT/GB91/01134, filed July 10, 1991

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APR 30 2004

## Foreign Applications

UNITED KINGDOM 9015198.6 07/10/1990  
UNITED KINGDOM 9022845.3 10/19/1990

WASHINGTON, D.C.

UNITED KINGDOM 9024503.6 11/12/1990  
UNITED KINGDOM 9104744.9 03/06/1991  
UNITED KINGDOM 9110549.4 05/15/1991

**If Required, Foreign Filing License Granted:** 04/27/2004

**Projected Publication Date:** 08/05/2004

**Non-Publication Request:** No

**Early Publication Request:** No

**Title**

Methods for producing members of specific binding pairs

**Preliminary Class**

435

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**LICENSE FOR FOREIGN FILING UNDER  
Title 35, United States Code, Section 184  
Title 37, Code of Federal Regulations, 5.11 & 5.15**

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**NOT GRANTED**

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US005969108A

**United States Patent** [19]

McCafferty et al.

[11] Patent Number: **5,969,108**[45] Date of Patent: **Oct. 19, 1999**[54] **METHODS FOR PRODUCING MEMBERS OF SPECIFIC BINDING PAIRS**

- [75] Inventors: **John McCafferty**, Sawston; **Anthony Richard Pope**; **Kevin Stuart Johnson**, both of Cambridge; **Henricus Renerus Jacobus Mattheus Hoogenboom**, Little Shalford; **Andrew David Griffiths**, Cambridge; **Ronald Henry Jackson**, Cambridge; **Kaspar Philipp Holliger**, Cambridge; **James David Marks**, Cherry Hinton, all of United Kingdom; **Timothy Piers Clackson**, Palo Alto, Calif.; **David John Chiswell**, Middle Claydon, United Kingdom; **Gregory Paul Winter**; **Timothy Peter Bonnert**, both of Cambridge, United Kingdom

- [73] Assignees: **Medical Research Council**, London; **Cambridge Antibody Technology Limited**, Cambridgeshire, both of United Kingdom

[21] Appl. No.: **07/971,857**[22] PCT Filed: **Jul. 10, 1991**[86] PCT No.: **PCT/GB91/01134**§ 371 Date: **Jan. 8, 1993**§ 102(c) Date: **Jan. 8, 1993**[87] PCT Pub. No.: **WO92/01047**PCT Pub. Date: **Jan. 23, 1992**[30] **Foreign Application Priority Data**

Jul. 10, 1990	[GB]	United Kingdom	9015198
Oct. 19, 1990	[GB]	United Kingdom	9022845
Nov. 12, 1990	[GB]	United Kingdom	9024503
Mar. 6, 1991	[GB]	United Kingdom	9104744
May 15, 1991	[GB]	United Kingdom	9110549

[51] Int. Cl.<sup>6</sup> ..... **C07K 19/00**; **C07H 21/04**; **C12N 15/13**[52] U.S. Cl. .... **530/387.3**; **530/867**; **435/9.1**; **435/69.1**; **435/69.8**; **435/320.1**; **435/235.1**; **536/23.1**; **536/23.53**; **536/23.4**[58] Field of Search ..... **530/387.1**, **412**, **530/387.3**, **867**; **536/23.1**, **23.53**, **23.4**; **435/5**, **252.3**, **6**, **69.6**, **7.1**, **69.7**, **9.1**, **69.1**, **69.8**, **230.1**, **320.1**[56] **References Cited****U.S. PATENT DOCUMENTS**

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WO 88/09344	12/1988	WIPO	C07K 13/00
WO 90/02809	3/1990	WIPO	C12P 21/00
WO 90/05144	5/1990	WIPO	C07K 13/00
WO 90/14424	11/1990	WIPO	C12N 15/00
WO 90/14430	11/1990	WIPO	C12P 19/34
WO 90/14443	11/1990	WIPO	C12Q 1/70
WO 91/10737	7/1991	WIPO	C12N 15/13
WO 91/17271	11/1991	WIPO	C12Q 1/70
WO 92/06204	4/1992	WIPO	C12N 15/64
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WO 92/18619	10/1992	WIPO	C12N 7/01

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 Sambrook et al. *Molecular Cloning: A Laboratory Manual* 4.13, 4.14, 4.17-4.19, 4.46 and A.12 (1989).

*Primary Examiner*—Frank C. Eisenschenk*Attorney, Agent, or Firm*—Marshall, O'Toole, Gerstein, Murray & Borun[57] **ABSTRACT**

A member of a specific binding pair (sbp) is identified by expressing DNA encoding a genetically diverse population of such sbp members in recombinant host cells in which the sbp members are displayed in functional form at the surface of a secreted recombinant genetic display package (rgdp) containing DNA encoding the sbp member or a polypeptide component thereof, by virtue of the sbp member or a polypeptide component thereof being expressed as a fusion with a capsid component of the rgdp. The displayed sbps may be selected by affinity with a complementary sbp member, and the DNA recovered from selected rgdps for expression of the selected sbp members. Antibody sbp members may be thus obtained, with the different chains thereof expressed, one fused to the capsid component and the other in free form for association with the fusion partner polypeptide. A phagemid may be used as an expression vector, with said capsid fusion helping to package the phagemid DNA. Using this method libraries of DNA encoding respective chains of such multimeric sbp members may be combined, thereby obtaining a much greater genetic diversity in the sbp members than could easily be obtained by conventional methods.

**59 Claims, 46 Drawing Sheets**



JUL 12 2004

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APPLICATION NUMBER	FILING OR 371 (c) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
10/803,622	03/18/2004	John McCafferty	05569.0004.DVUS11

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 Washington, DC 20004-2402

CONFIRMATION NO. 6206



\*OC000000012472519\*

Date Mailed: 04/28/2004

### Notice Regarding Benefit/Priority Claim(s)

☐ **Improper Benefit Claim(s) to Prior-Filed Nonprovisional Application(s)**

The benefit claim(s) to prior-filed nonprovisional application(s) is improper because there is no specific reference for each prior-filed application that includes: (1) the identification of the prior-filed application by application number, or international application number and international filing date; and (2) a clear indication the relationship (i.e., continuation, divisional, or continuation-in-part) of the nonprovisional applications. For example, applicant should amend the specification to include a specific reference, such as "This application is a continuation of Application No. 10/---,--- filed ---." in the first sentence of the specification following the title.

Applicant should review each benefit claim submitted and, if appropriate, provide the proper reference to the prior-filed application(s) as required by 37 CFR 1.78. A proper relationship includes an identification of each nonprovisional application as a continuation, divisional or continuation-in-part application of the immediate prior-filed nonprovisional application for which a benefit is claimed under 37 CFR 1.78 in order to establish copendency throughout the entire chain of prior-filed applications. The specific reference must be included in the domestic priority information section of an application data sheet (37 CFR 1.76), or the specification must contain, or be amended to contain, such reference in the first sentence following the title.

**Timeliness:** The required reference for each benefit claim must be filed during the pendency of the instant application and within the later of: (1) four months from the actual filing date of the instant application, or the national stage commencement date if the instant application is a national stage application under 35 U.S.C. 371; or (2) sixteen months from the filing date of the prior-filed application. Failure to timely file the required reference is considered a waiver of any benefit claim, unless a grantable petition to accept an unintentionally delayed claim under 37 CFR 1.78(a), the surcharge set forth in 37 CFR 1.17(t), and the required reference are filed. See 37 CFR 1.78(a).

☐ **Improper Benefit Claim(s) to Prior-Filed Nonprovisional Application(s)**

The benefit claim(s) to prior-filed provisional application(s) is improper because the instant application was not filed within twelve (12) months from the filing date of the provisional application, and there is no indication of an intermediate nonprovisional application that is directly claiming the

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benefit of the provisional application and filed within 12 months of the filing date of the provisional application. For example, applicant should amend the specification to include a specific reference, such as "This application is a continuation of Application No. 10/---,--- filed ---, which claims the benefit of U.S. Provisional Application No. 60/---,--- filed---." in the first sentence of the specification following the title.

Applicant should review each benefit claim submitted and, if appropriate, provide the proper reference to the prior-filed applications (including an indication of any intermediate nonprovisional application that is directly claiming the benefit of the provisional application and filed with 12 months of the filing date of the provisional application) as required by 37 CFR 1.78. The required reference must be included in the domestic priority information section of an application data sheet (37 CFR 1.76), or the specification must contain, or be amended to contain, such reference in the first sentence following the title.

**Timeliness:** The required reference for each benefit claim must be filed during the pendency of the instant application and within the later of: (1) four months from the actual filing date of the instant application, or the national stage commencement date if the instant application is a national stage application under 35 U.S.C. 371; or (2) sixteen months from the filing date of the prior-filed application. Failure to timely file the required reference is considered a waiver of any benefit claim, unless a grantable petition to accept an unintentionally delayed claim under 37 CFR 1.78(a), the surcharge set forth in 37 CFR 1.17(t), and the required reference are filed during the pendency of the instant application.

☐ **Improper Priority Claim(s) to Prior-Filed Foreign Application(s)**

The instant application was not filed within twelve (12) months from the filing date of the prior-filed foreign application, and there is no benefit claim to an intermediate nonprovisional application filed within 12 months of the filing date of the foreign application. Applicant should review each priority claim submitted and, if appropriate, provide the proper reference to any intermediate nonprovisional application filed within 12 months of the filing date of the foreign application in compliance with 37 CFR 1.78, or delete the priority claim. The required reference to an intermediate nonprovisional application must be included in the domestic priority information section of an application data sheet (37 CFR 1.76), or the specification must contain, or be amended to contain, such reference in the first sentence following the title.

**Timeliness:** The required reference for the benefit claim to an intermediate nonprovisional application must be filed during the pendency of the instant application and within the later of: (1) four months from the actual filing date of the instant application, or the national stage commencement date if the instant application is a national stage application under 35 U.S.C. 371; or (2) sixteen months from the filing date of the prior-filed application. Failure to timely file the required reference is considered a waiver of any benefit claim, unless a grantable petition to accept an unintentionally delayed claim under 37 CFR 1.78(a), the surcharge set forth in 37 CFR 1.17(t), and the required reference are filed.

☐ **Benefit Claims to More Than 400 Prior-Filed Applications**

The Office's automated system to record and capture benefit claims is only capable of recording benefit claims for 400 prior-filed applications. Therefore, the Office is unable to generate a filing receipt containing benefit claims for more than 400 prior-filed applications even though applicant is entitled to submit benefit claims for more than 400 prior-filed applications. Accordingly, applicant should not request a corrected filing receipt to include benefit claims for more than 400 prior-filed applications.



**Prior-Filed Nonprovisional Application has been Improperly Indicated as a National Stage (35 U.S.C. 371) Application**

Applicant submitted a benefit claim to a prior-filed nonprovisional application and improperly indicated that the prior-filed application is a national stage application under 35 U.S.C. 371. The Office's records show that the prior-filed application is an application filed under 35 U.S.C. 111(a). The Office has entered the benefit claim to the prior-filed application as a benefit claim to an application filed under 35 U.S.C. 111(a). Any request for a corrected filing receipt to include the indication that the prior-filed application is a national stage application will not be granted unless applicant supplies evidence that the prior application was in fact a national stage application. Accordingly, applicant should not submit such request without such evidence. Applicant should submit an amendment (or an application data sheet (ADS) if the benefit claim was submitted in an ADS) to delete the indication that the prior-filed application is a national stage application.

For more information and examples on benefit claims, please see Claiming the Benefit of a Prior-Filed Application under 35 U.S.C. 119(e), 120, 121, and 365(c), 1268 Off. Gaz. Pat. Office 89 (March 18, 2003), which is available on the USPTO website at <http://www.uspto.gov/web/offices/com/sol/og/2003/week11/patbene.htm>, and the Manual of Patent Examining Procedure (MPEP) §§ 201.11 and 201.14.

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